

ABSTRACT OF THE DISCLOSURE

5 A system and method for generating return-to-zero (RZ) optical data in a digital lightwave communications system using a two-stage modulator arrangement. RF electrical data is provided to a first stage modulator for modulating a light input into an intermediary optical data output having a non-return-to-zero (NRZ) format. Phase differences between the data and a clock signal associated therewith are controlled via a phase feedback control loop that is operable responsive to a phase dither reference signal. The clock signal is adjusted based on a phase control signal provided by the phase feedback control loop so as to generate a phase-adjusted clock. The phase-adjusted clock is supplied to a second stage modulator operable to blank out a suitable portion of each NRZ data bit interval and thereby create optical data having the RZ format.

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